The Dark Side of Aligning Sales Force Compensation Plans with Company Goals: The Role of Compensation Plan Complexity

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The Dark Side of Aligning Sales Force Compensation Plans with Company Goals: The Role of Compensation Plan Complexity

When designing compensation plans (CPs) firms align variable incentives with company goals for optimal sales behavior control. However, sales people often experience difficulties adhering to their CP in selling situations due to increasing compensation plan complexity (CPC). If salespeople cannot act upon the CP, it loses its central function of behavior control and decreases high quality decision making. How can firms manage the balancing act between company goal alignment and sales performance results? By being the first paper to introduce CPC this study opens a new field in literature. A large-scale laboratory experiment with 180 subjects examines the effects of CPC on sales effort, behavior and performance. The paper demonstrates that CPC can be detrimental to sales effort and performance and determines the ideal CPC level to maximize both variables. The findings indicate CPC needs to be included in future research and aid firms in designing the ideal CP for their sales force.

Keywords: Sales force compensation, task complexity, sales performance

Track: Sales Management and Personal Selling

1. Introduction

Compensation plans are a major instrument for sales force control (Oliver & Anderson, 1994) designed to align sales force behavior with the company strategy (e.g. Coughlan, 1993). Although salesforce compensation is widely recognized as one of the key drivers of firm performance (Zoltners, Sinha, & Zoltners, 2001), practitioners have difficulties to find the right compensation plan (CP) for their sales environment: According to a study by Schmitz (2013), 76.6 % of sales firms adjust the CP at least once a year.

Recent sales research suggests that CPs contain an unlimited amount of variable components (Erevelles, Dutta, & Galantine, 2004). This complexity is also reflected in practice: (Darmon & Martin, 2011). In an attempt to guide sales people in increasingly complex sales environments (e.g. Schmitz & Ganesan, 2014) and to align the CP with organizational strategies (Johnson, Friend, & Agrawal, 2016), firms transfer the complexity to the CP. Schmitz (2013) shows that 18.7% of sales companies use six or more criteria to determine one bonus payment. While it is important to provide guidance towards the company goals in increasingly complex sales environments (Brown et al., 2005), salespeople must also understand the CP to be able to draw from that knowledge during customer encounters. A CP will only provide the intended guidance if the sales force is able to translate the incentives into adequate behavior (Zoltners, Sinha & Lorimer, 2006).

Practitioners (e.g. Schmitz, 2013) and scholars (e.g. Zoltners, Sinha & Lorimer, 2006) alike emphasize the need for simple and understandable CPs. Yet, although of utmost practical relevance, compensation plan complexity (CPC) and its effects have remained untouched by research. This paper is driven by the question how CPC influences sales effort, behavior, and performance and is, hence, a first step toward closing the gap between practitioner interest in CPC and the focus of academic research. Conducting an experiment with 180 B2B salespeople, this study shows that there is an optimal level of CPC that maximizes salespeople cognitive effort and sales performance. For high CPC, the results of the analyses show that salespeople reduce cognitive effort by focusing on the most relevant and simple quotas. Following, their sales performance suffers. This paper proceeds as follows: First the conceptual framework and hypotheses are developed. Then, the data and the methodology is described. Next, the findings are presented, and their managerial, theoretical, and methodological implications as well as the limitations of the research are discussed.

2. Conceptual Framework

While prior research has predominantly focused on finding the optimal CP components such as commissions (e.g. Farley, 1964) and bonuses (e.g. Chung, Steenburgh, & Sudhir, 2009) while disregarding human irrational behavior (e.g. Basu et al. 1985; Erevelles, Dutta, & Galantine, 2004), this paper explicitly assumes human irrationality and limited cognitive capacity. This assumption leads to the conclusion that CPC influences sales effort, behavior and performance. In the following, CPC will be conceptualized and the hypotheses and their theoretical rationale will be developed.

2.1 Compensation plan complexity and its role within the sales task

As CPs are designed to steer sales force behavior (Johnson, Friend, & Agrawal, 2016) they define the desired *goals* as well as the salespersons' direction of effort towards the *input* regarding the sales task. Thus, CPC is related to task complexity, a known concept in goal-setting and decision-making literature. The definitions of task complexity in literature can be structured into two perspectives: subjective and objective task complexity (Liu & Li, 2012). While objective task complexity refers to the aggregation of task characteristics independent of task performers (e.g. Campbell, 1988), subjective task complexity considers the joint effect of task and task performer characteristics (e.g. Byström & Järvelin, 1995). Similarly, CPC can be viewed from an objective or subjective perspective. For the purpose of this paper, CPC is defined as '*the aggregation of any intrinsic compensation plan characteristic that influences the performance of the sales task*' and, thus, follow the notion of objective CPC.

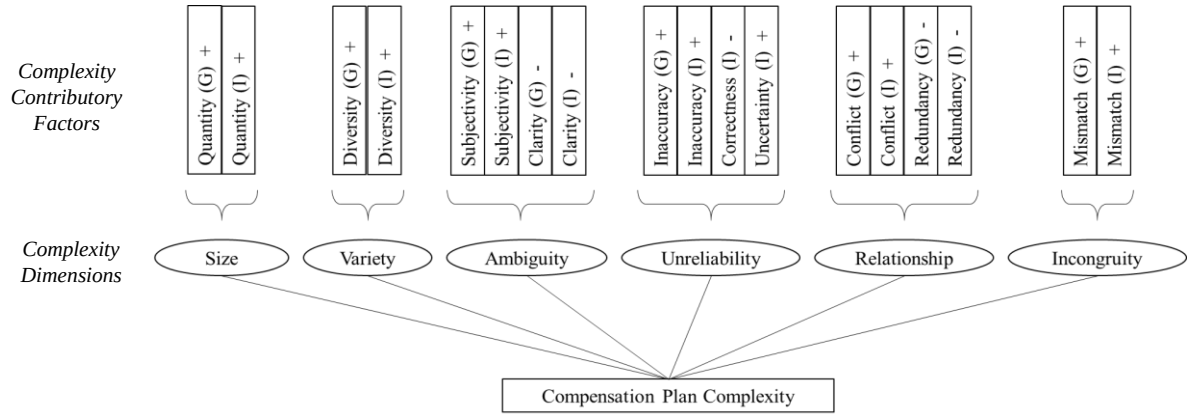

Figure 1. Conceptualization of compensation plan complexity.

Figure 1 illustrates the present conceptualization of CPC. CPC is divided in salient complexity dimensions. Each of which encompasses complexity contributory factors that relate to the impact of CPC on both the goal (G) of and the input (I) towards the sales task. While the goal refers to the sales target(s) determined by the variable CP components, input

refers to the information the sales force needs to process to reach the sales target(s). The direction of the effect of each complexity contributory factor on CPC is also illustrated in Figure 1. More information on the conceptualization of CPC is given upon request.

2.2 Compensation plan complexity and cognitive effort

Goal theory proposes that a higher task complexity results in higher effort and higher performance, even for the most complex goals (Locke & Latham, 1990). Applied to the context of this paper, high OCPC would, thus, be linearly positively related to the exerted cognitive effort to solve the sales task (i.e. sales effort). However, more recent research has introduced self-efficacy (Bandura, 1982) to goal theory (Bartol & Locke, 2000). Self-efficacy is the belief that one's capabilities, skills and knowledge suffice to organize and execute the courses of action required to achieve a given goal (Bandura, 1982). High self-efficacy has been positively associated with sales effort (e.g., Chowdhury, 1993, Srivastava, Strutton, & Pelton, 2001). However, as soon as an assigned goal is considered unattainable, self-efficacy and subsequently effort decrease (e.g., Appelbaum & Hare, 1996; Locke & Latham, 2008). If the salespeople believe that they cannot reach the sales targets, why should they bother to try? In the CPC context this indicates that if the combined goals of the CP are considered attainable, sales people exert the cognitive effort necessary to reach the goal. If the CPC is so high that the sales force's self-efficacy and belief to reach the targets decrease, they exert less cognitive effort. Therefore, I hypothesize:

H_1: The relationship between compensation plan complexity and cognitive effort is an inverted u-curve.

2.3 Strategies for the reduction of cognitive effort

Before individuals lose the self-efficacy required to expand cognitive effort for a complex task (e.g. Locke & Latham, 2008), they attempt to cope with the cognitive load imposed by the complexity (Newell & Simon, 1972). They use strategies to reduce the cognitive effort to keep the information-processing demands within the limits of their cognitive capacity (Payne, 1976). Shah and Oppenheimer (2008) propose in their effort-reduction framework four methods that are relevant to the context: (1) examining fewer information cues, (2) reducing the difficulty of retrieving and storing cues, (3) simplifying the weighting principles for cues, (4) integrating less information in decision making.

Examining and integrating less information. To decrease the cognitive demands of a decision, individuals use strategies to reduce the number of information cues considered for each alternative by investigating one cue at a time (e.g. Fishburn, 1967). They reduce

cognitive effort as they decrease the amount of information that needs to be stored in working memory (Shah & Oppenheimer, 2008). In the CPC context this means that the sales force will not consider every single quota when deciding which product to offer to the customer.

Simplifying the weighting principles for cues. Most scholars propose that individuals simplify decision making by assigning the same weight to each information cue (e.g. Payne, Bettman, & Johnson, 1993). However, in the CPC context this would mean that the sales force treats each quota of their variable CP the same, regardless of their impact on their compensation. Yet, the sales force has an intrinsic motivation to maximize their financial income. Therefore, salespeople would rather assign the most impactful quotas a higher weight than to work towards a quota that has the lowest financial income.

Reducing the difficulty to retrieve and store information. Shah and Oppenheimer (2008) propose that humans reduce cognitive effort by relying on information that can either be calculated quickly or is otherwise easily available (Tversky & Kahneman, 1974). It implies that sales people use more quotas that are readily accessible, unambiguous, reliable, and without conflict (e.g. revenue) for low CPC and less quotas that need computation, are ambiguous, unreliable, and in conflict with other quotas (e.g. customer satisfaction) for high CPC. Therefore, I hypothesize:

H_{2a}: Individuals focus on more quotas with a high impact on their compensation and fewer quotas with a low impact on their compensation for high compensation plan complexity than for low compensation plan complexity.

H_{2b}: Individuals focus on more simple quotas and fewer complex quotas for high compensation plan complexity than for low compensation plan complexity.

2.4 Compensation plan complexity and sales performance

At first, one might assume a negative linear function in that performance peaks at the lowest complexity level as the least cognitive effort is required to solve the task. However, if self-efficacy is high, goal theory finds a *positive* linear function in that the lowest level of complexity results in the lowest levels of performance (Locke & Latham, 2002). Applying goal theory to the field of education, Ubreit, Lane, and Dejud (2004) find that low complexity results in less on-task behavior than high complexity. Thus, individuals spend less cognitive effort on low-complexity tasks than they should.

However, goal-theory ignores the limited cognitive capacity of individuals. Yet, prior research established well that individuals have limited cognitive capacity (e.g., Simon, 1957) and must work within these boundaries (Sweller, 1988). As complex and difficult tasks

require higher cognitive effort (Locke & Latham, 2002), a level of complexity must exist for which the cognitive effort necessary to achieve the goal surpasses the limits of the individual's cognitive capacity. Following, self-efficacy drops (see chapter 2.3). Goal theory (Locke & Latham, 1990) paired with self-efficacy suggests that individuals gradually 'give up' and do not expand the effort necessary to achieve the goal (see chapter 2.3). Therefore, the individual's performance decreases. Therefore, I hypothesize:

H_3: The relationship between compensation plan complexity and average sales performance is an inverted u-curve.

H_4: Cognitive effort mediates the effect of compensation plan complexity on average sales performance.

3. Methodology

3.1 Data collection and sample structure

An online experiment was conducted with 180 salespeople with US residency from various B2B industries, which were acquired via an online panel. A within-subject design is used to test the hypotheses. The experiment included six selling scenarios in random order, each of which was assigned one of six different CPs with varying complexity levels. The selling scenarios only differed in their CPC, everything else was held equal. After receiving an introduction to the scenario's CP, the respondents were required to make five decisions on which laptop they would offer based on the CP assigned to the scenario. The products could be distinguished by four criteria matching the quotas of the CP.

3.2 Measures and their assessment

As most evaluations of CPC are qualitative in practice (Zoltners, Sinha, & Lorimer, 2006) and, to the best of our knowledge, research has so far not examined the construct, this paper's operationalization of CPC is the first of its kind in both research and practice. The operationalization of objective task complexity in literature usually only includes two levels: 'simple' and 'complex' (e.g. Hu, Huhmann, & Hyman, 2007; Maynard & Hakel, 1997). This conceptualization of CPC, however, allows the creation of six CPs with six different complexity levels (CP1 - CP6, see Table 1) according to the defined complexity dimensions.

CP	Revenue	Margin	Customer Satisfaction	New Product Sales	New Customer Sales	Number of Sales Trainings
1	100 %					
2	50 %	50 %				
3	40 %	30 %	30 %			
4	35 %	35 %	20 %	10 %		
5	30 %	25 %	15 %	15 %	15 %	
6	25 %	20 %	20 %	15 %	10 %	10 %

Table 1. Operationalization of compensation plan complexity.

Mean sales performance is measured with mean quota achievement. Quota focus refers to the degree the participants used the individual quotas in their decision making. calculated the quota focus for all measurable sales goals by using the uncapped average quota achievement in percent for each complexity scenario. Following it was possible to derive by how many percent the participants over- or under-fulfilled the goal set by the quota. The complete list of measurement items is available upon request.

4. Results

The results of the repeated measures ANOVAs show that there was a significant effect of CPC on cognitive effort, quota focus of revenue as well as margin, and on sales performance ($p < 0.001$). The means of cognitive effort and sales performance per CPC are displayed in figure 2 and indicate that the relationship between CPC and cognitive effort and CPC and sales performance are both inverted u-curves in line with H_1 and H_3.

Pairwise comparisons reveal that cognitive effort is significantly lower for CP 1 (M = 10.2, SD = 4.66) than for any other CPC (all $p < 0.001$). Cognitive effort for CP 2 (M = 13.0, SD = 6.04) is significantly lower than cognitive effort for CP 3 (M = 14.6, SD = 7.74, p = 0.034) and cognitive effort for CP 4 (M = 18.7, SD = 19.5, p = 0.001). This indicates that participants reacted to rising low CPC by exerting more cognitive effort to manage the complexity. As cognitive effort for CP 4 is significantly higher than cognitive effort in CP 6 (p = 0.021), a drop in cognitive effort for increasing high levels of CPC is supported, with maximal cognitive effort in CP 4. For sales performance pairwise comparisons show that sales performance in CP 2 (M = 0.915, SD = 0.004) and CP 3 (M = 0.925, SD = 0.002) are significantly higher than sales performance in CP 1 (M = 0.877, SD = 0.008, $p < 0.001$), CP 4 (M = 0.883, SD = 0.004, $p < 0.001$), CP 5 (M = 0.874, SD = 0.005, $p < 0.001$), and CP 6 (M = 0.870, SD = 0.005, $p < 0.001$). Sales performance is highest in CP 2 and CP 3.

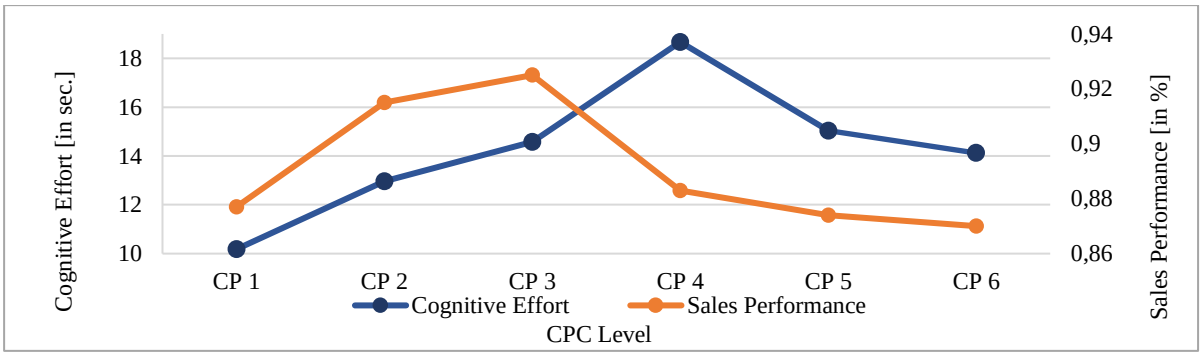

Figure 2. Means plot of cognitive effort and sales performance per CPC level.

Figure 3 displays the means of quota focus regarding revenue and margin for H_2. The mean value of quota focus regarding revenue for both CP 1 (M = - 0.08, SD = 0.19) and CP 2 (M = -0.032, SD = 0.2) are significantly lower than the means for CP 3 (M = 0.014, SD = 0.186), CP 4 (M = 0.031, SD = 0.193), CP 5 (M = 0.027, SD = 0.206), and CP 6 (M 0.021, SD = 0.183, all $p < 0.001$). All other pairwise comparisons are statistically insignificant at p = 1.000. Contrary to quota focus regarding revenue, quota focus regarding margin shows a significant decrease for increasing CPC. The mean for CP 1 (M = 0.026, SD = 0.171) is significantly higher than the means for CP 3 (M = -0.037, SD = 0.159), CP 4 (M = -0.037, SD = 0.151), CP 5 (M = -0.048, SD = 0.158), and CP 6 (M = -0.036, SD = 0.156, all $p < 0.001$). Participants concentrated on fulfilling the required quota for margin for the lowest two CPC levels, but as soon as CPC increased further, they shifted their attention to fulfilling the quota for revenue, which is both financially more relevant and simpler to process for the sales force than the quota for margin. Therefore, H_{2a} and H_{2b} are supported.

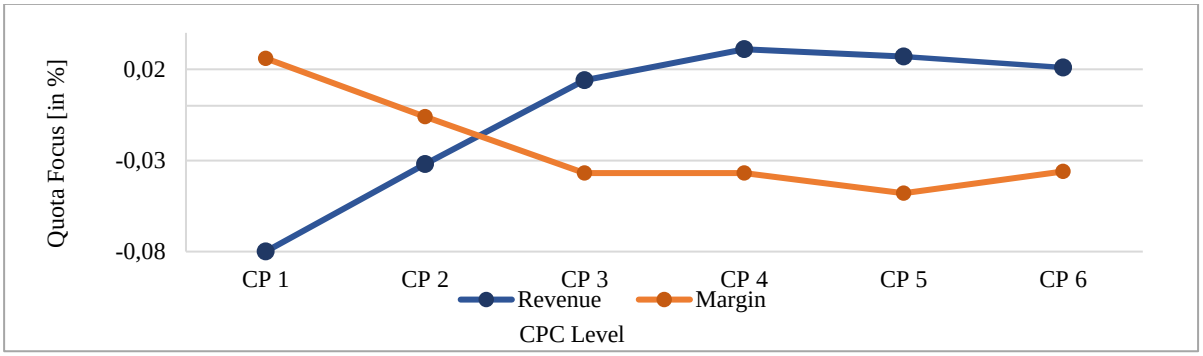

Figure 3. Means plot of quota focus regarding revenue and margin.

Hypothesis H_4. H_4 tests the relationship with a mediator analysis using a simple linear regression approach with Hayes' model 4. Table 8 depicts the model summary of the hypothesis test. All direct and indirect effects are significant, although the effect size is quite small. As the bootstrapped confidence intervals do not include zero (*BootLLCI* = 0.0002;

BootULCI = 0.0011) and *c* - *c'* = 0.0007 lies within the bootstrapped confidence interval, the indirect effect is significant. Therefore, H_4 is supported.

	F	*df1*	*df2*	*p*	R^2
OCPC → Sales Performance	20.1	1	1064	0.000	0.019
OCPC → Cognitive Effort	34.7	1	1064	0.000	0.032
OCPC → Cognitive Effort → Sales Performance	14.3	2	1063	0.000	0.026

Table 2. Results of the mediation analysis.

5. Discussion

This study examined the effects of CPC on sales effort, behavior, and performance. I argue that there is an optimal CPC that maximizes sales effort and sales performance assuming that sales people have limited cognitive capacity. The results support the hypotheses. A CPC of CP3 is considered optimal for sales performance, a CPC of CP 4 for sales behavior. Salespeople use strategies aimed at complexity reduction to cope with high CPC levels within their cognitive capacity.

5.1 Theoretical contributions

First, prior research has disregarded human irrational behavior when designing optimal CPs. This paper is the first to introduce, define and conceptualize CPC and, thus, fills the gap between practitioner interest and scholar focus. Second, this paper examines potential effects of CPC on sales effort, behavior and performance revealing that there is an optimal level of CPC for sales effort and sales performance maximization. CPC can indeed be detrimental to sales performance if it is both lower and higher than a CPC of CP4. Third, this study contributes to research by analyzing the mechanisms behind the effect of CPC on sales performance and show that cognitive effort mediates the relationship.

5.2 Managerial implications

First, the results show that salespeople can cognitively handle complexity levels up to CP 4, however, sales performance is maximized at CP 3. This compensation plan included three variable components (revenue, margin, customer satisfaction), which each account for a different percentage of the bonus. Thus, it is recommended that organizations only choose variable components which summarize at the same complexity level as CP 3. Second, CPC does not only increase with additional CP components. The variety, ambiguity, unreliability, and relationship of the CP components is also essential to determining the OCPC level. Therefore, it is recommended that firms follow Doran's SMART framework (1981) or a

similar goal-setting strategy when designing CPs. Third, the findings suggest that sales effort and performance decrease because the sales force loses its self-efficacy and perceives the probability, that their effort leads to the performance necessary to achieve the reward, as low. Therefore, boosting the sales force's self-efficacy with proximal goals (Appelbaum and Hare, 1996) or transformational leadership (e.g. Kirkpatrick & Locke, 1996) could be valuable.

5.3 Limitations and directions for future research

First, working only with subject with U.S. residency potentially limits the generalizability of the results as sales force steering effectiveness strongly depends on cultural contexts (Hohenberg & Homburg, 2016). Second, the conceptualization of OCPC was only proposed and neither tested nor confirmed. Future research could reexamine the conceptualization and determine the exact amount of complexity that individual quotas contribute to the CP. Third, the focus of this study lies on one part of formal sales control mechanisms. However, the research gap is extremely large and it remains unclear how informal sales control mechanisms might influence the effects of OCPC. Therefore, I can only encourage future research to explore the possible impact of for example, leadership behavior, goal setting, team effects, and other non-formal variables. Still, this paper is opening an entirely new field for scientific literature. A large research gap remains with various directions and touchpoints that await to be explored by future research.

6. Key references

Basu, A. K., Lal, R., Srinivasan, V., & Staelin, R. (1985). Salesforce compensation plans: An agency theoretic perspective. *Marketing Science, 4*(4), 267-291.

Liu. P. & Li, Z. (2012). Task complexity: A review and conceptualization framework. *International Journal of Industrial Ergonomics*, *42*, 553-568.

Locke, E. A., & Latham, G. P. (2002). Building a Practically Useful Theory of Goal Setting and Task Motivation: A 35-year Odyssey. *American Psychologist, 57*(9), 705-717.

Shah, A. K., & Oppenheimer, D. M. (2008). Heuristics Made Easy: An Effort-Reduction Framework. *Psychological Bulletin*, *138*(2), 207-222.

Zoltners, A., Sinha, P., & Lorimer, S. E. (2006). *The Complete Guide to Sales Force Incentive Compensation*. Nashville, TN: American Management Association.

Zoltners, A. A., Sinha, P., & Zoltners, G. A. (2001). *The complete guide to accelerating sales force performance*. AMACOM/American Management Association.

More references are available upon request.